Westhaven STEM Live Lab

Facilities Redesign

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LIBS 674: Library Management & Leadership

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Library Space Evaluation

Westhaven's Library is centrally located in the commons area of the school, along with the gymnasium, music, and art rooms. The library has a very welcoming space with its ceiling to floor windows and a colorful area rug laying in the front as you enter. There is a small space sectioned off for small group activities, which is used by the content area specialists. Connected to the library are 2 offices: the larger one is used by the 2 Technology Resource Teachers and the other is used as an In-school suspension room. The Library is used by the administrators for faculty meetings, various staff celebrations, and professional development sessions. The Library is also used for the district's Benchmark testing and SOL state assessments. Despite the open space and the natural light that flows into the library, it is not very inviting to its patrons. The circular wooden tables and chairs that are used for all activities and events that take place in the library make sitting for long periods uncomfortable. There isn't any welcoming designated area for small group interactions. The specialist normally requests tables and chairs to set up their space for small group sessions. There is no inviting signage to direct visitors to the different sections of the library. Instead, placed on top of the shelves, are small wooden signs that are not visible and appropriate for the young users of the library to see. See examples in the images of small group space, windows, and signage below.

Image #1: Small group space

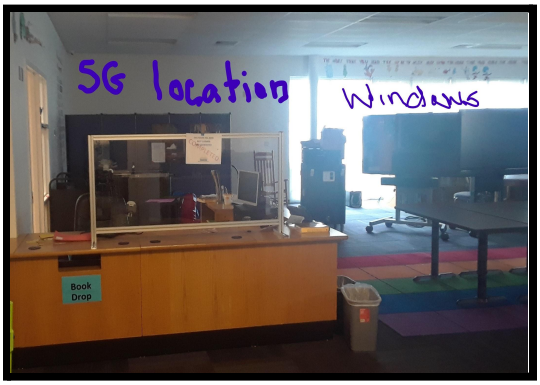


Image #2: Wooden signage

Before the Covid19 Pandemic shutdown and mandates, the students, especially the upper grades(3rd -6th), did not have access to the library regularly. The American Library Association (2019), states that libraries are a major source for their patrons. Our library should be providing regular service and access to the resources that are available. Furthermore, with the change in how information is shared, the library should be providing high-quality resources, such as an improvement in the digital sources and more updated paper resources.

The Portsmouth Library Media Specialist's handbook states in its mission that all media specialists should, "provide its patrons with a safe, orderly, and ***inviting*** learning environment that offers high-quality resources" (Portsmouth Library Media Center, 2020). As you enter the library, you are safe and the library is bright and spacious. However, it is far from inviting and welcoming. The students and staff who use the library regularly feel uncomfortable sitting on the wooden furniture. In addition, Moran and Morner make a very clear statement that "physical changes are necessary because of digital resources and new ways that library clients are using libraries." In order for Westhaven library to fulfill its mission, a change in its learning environment is needed (2018, p.111).

Facilities Redesign Plan

Justification

"STEM education has received attention both as a reform pedagogy and as a public means for economic growth and national security" (Kloser, M., Wilsey, M., Twohy, K. E., Immonen, A. D., & Navotas, A. C., 2018). With the push for STEM in schools and the need for Westhaven to improve its academic performance, the STEM Live Lab program would be a tool to work towards the district's mission to "provide educational opportunities to assure all students achieve high academic growth" (PPS Five-year strategic plan, 2015, p.11). Further, the program would allow the librarian and teachers to make progress towards "implementing highly effective, research-based curriculum, instruction and assessment practices, by using curriculum and related programs that will meet the needs of all students (PPS Five-year strategic plan, 2015, pp.11-12).

The *STEM Live Lab* would be located in the library where small group activities would take place in collaboration with the science department and third through fifth-grade science teachers. The lab would house STEM kits and resources, including electronic devices needed to conduct activities using the newly purchased lab tables. The lab would allow the students to perform STEM-related activities and learn how to perform research while in the library. With the collaborative efforts of the librarian and science teachers, an improvement would be made on the science performance of the state Standards of Learning assessment(SOL), the district Benchmark, and classroom assessments.

Action Plan

The implementation of the STEM Live Lab would be in the Fall of the next fiscal school year. The location of the lab would require minimal changes, which would include moving the technology resource teachers to the front office of the library(formally the In-School Suspension room). The current office has plenty of shelf space and storage cabinets for all science materials and for all technology to be stored securely when not in use. This room would require reorganizing of materials to the back storage attached to the lab. Lab tables would be placed in the room for small group activities and outside the small group section in front of the new glass whiteboard. The areas that would be used would be decorated with colorful and inviting STEM signage to encourage participation and curiosity in the program. The glass whiteboard would be hung in the small group space displaying events and activities for the students and staff to view regularly. Four lab tables, the area rug, plants, and bean bags would enhance the look of the small group area. Banners and posters would be hung throughout the library and the commons area to bring attention to the STEM lab. Finally, the 20-gallon fish tank would be placed at the front of the library entrance.

Action Plan Timeline

Who	What	When
Librarian	Turn in purchase orders	May 2021
School Secretary	Place orders	May-June 2021
Resource Technology Teachers	Remove & reorganize tech resources	May-June 2021
Librarian & secured Volunteers	Clean, unpacked resources, set up the lab	August-September 2021
Librarian & Instructional Assistant	Staff Professional Development	August 2021
Librarian & Instructional Assistant	Student/parent orientation	September 2021

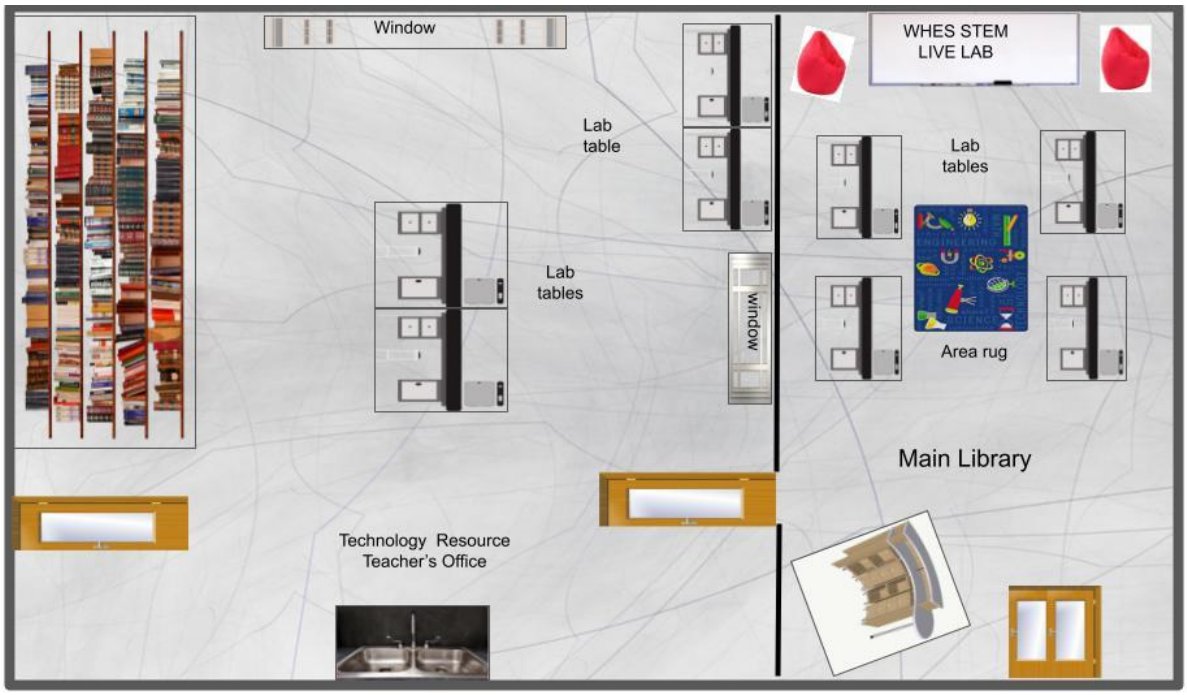
Budget

Items	Vendor	Description	Quantity	Total
Science lab tables	Amazon	Science Lab Table w/Chemical Resistant	8	$303 each: $2,424 total
Adjustable grey stools	Amazon	2-PK OEF furnishings height-adjustable grey stools	14	$78 per pack: $1,092 total
Glass whiteboard	Amazon	Quartet Glass Whiteboard, Magnetic Dry Erase Whiteboard	3	$268 each: $ 804 total
STEM Science classroom area rug	Amazon	Educational area rug	1	$376 each: $376 total
Fish Tank	Walmart	20-Gallon Deluxe Aquatic Turtle Tank Starter Kit	1	$185 each: $185 total
Palm plants	Lowe's	Majesty palm plants	4	$40 each: $160 total
Plant pots	Lowe's	Flute planter Teal Resin Planter	4	$25 each: $100 total
Retractable banners	Office Depot	Retractable banners stand up & stand out	1	$76 each: $76 total
STEM engineer poster	Amazon	Engineering Design Process: Steps to STEM Learning Poster	5	$15 each: $75 total
Custom banners	Office Depot	Custom Banner	4	$15 each: $60 total
STEM career posters	Amazon	STEM careers inspire poster	5	$11 each: $55 total
Waterproof bean bags	Amazon	N/C Sofa cover lounge waterproof bean bag	2	$27 each: $54 total
STEM bulletin board set	Amazon	STEM Bulletin Board Set	4	$13 each: $52 total
Total Amount				***$5,513***

Before and After Visuals

Before

After



Reflection

A truly effective school library should be performing as a driving force of learning, reading, and discovering. My vision of an improved library media center at Westhaven Elementary is about realizing the potential that exists in every child. What every child experiences in school and specifically in the STEM lab will impact their future. The process of evaluating their comprehension of the activities and their experiences will be measured using formative and summative assessments. The Guided Inquiry Design will be a method used in assessing the students' progress. Students will be assessed by projects, portfolios, self-reflection, peer, and self-assessments.

The goal of the library media specialists will be to work collaboratively with the staff to improve students' learning, academic performance, and interest in STEM. The activities will not be limited to lab lessons and activities but will include interactions with individuals who are in the STEM field. The students will be able to experience the real-life application of STEM.

Renovation ideas will be taken from all the stakeholders of the lab, especially the students who will be the primary users. Equally important will be the opinion of the parents who can provide needed donations and help to get the funds to maintain the lab. Based on the size of the library, at this time, I can't foresee any additional renovation for the lab. Thus the need for collaboration!

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